

What do I need to know about TRIGONOMETRY for the AP exam (and life)

day 55

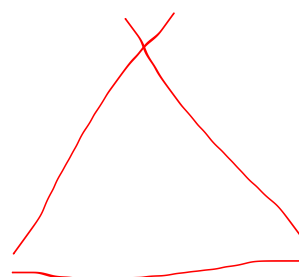
Bloom's taxonomy- revised  
- originalKnowledgeMemorize  
Regurgitate (facts)derivative  
rulesComprehensionUnderstand  
translation{ State a problem  
in one's wordsApplicationUse something in  
a new/unexpected  
situationAnalysisSeparate things  
into partsSynthesisEvaluate

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- Draw a square
- Draw a diagonal
- Measure the diagonal and sides

- Draw an equilateral triangle
- Draw in an altitude
- Measure



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SQUARElength of sidelength of diagonal

7.6 cm

10.8 cm =  $7.6\sqrt{2}$ 

6 cm

8.5 cm  $6\sqrt{2}$ 

5 cm

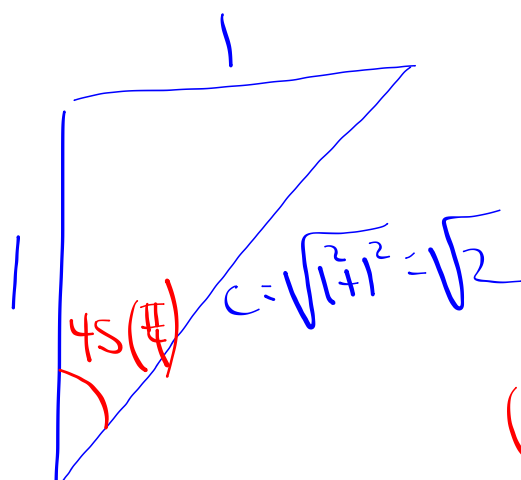
 $\left\{ \begin{array}{l} \sqrt{50} \text{ cm} \\ 7.3 \text{ cm} \end{array} \right. 5\sqrt{2}$ 

4 cm

5.9 cm  $4\sqrt{2}$  $\frac{19}{16}$  in $\frac{27}{16}$  in  $\frac{19}{16}\sqrt{2}$ 90  $\left[ \text{aka } \frac{\pi}{2} \right]$ 45  $\left[ \text{aka } \frac{\pi}{4} \right]$ 

$$\sin \frac{\pi}{4} = \sin 45$$

$$= \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$



$$\sin 45^\circ = \frac{\text{opp}}{\text{hyp}}$$

$$= \frac{1}{\sqrt{2}}$$

$$\cos 45^\circ = \frac{\text{adj}}{\text{hyp}}$$

$$= \frac{1}{\sqrt{2}}$$

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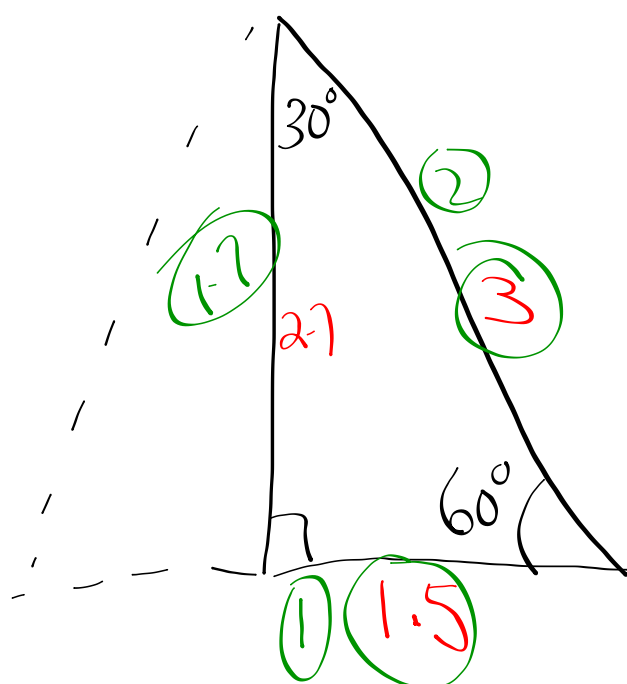
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EQUILATERAL TRIANGLES

lengths of		
<u><math>\frac{1}{2}</math> base</u>	<u>slant side</u>	<u>height</u>
1.5	3	2.7
1.5	3	2.7
2	4	3.5
1	2	1.7
$\frac{19}{32}$ in	$\frac{19}{16}$ in	1 in
2.5 cm	5	4

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$$\sin 30^\circ = \frac{\text{opp}}{\text{hyp}} = \frac{1.5}{3} = \frac{1}{2}$$

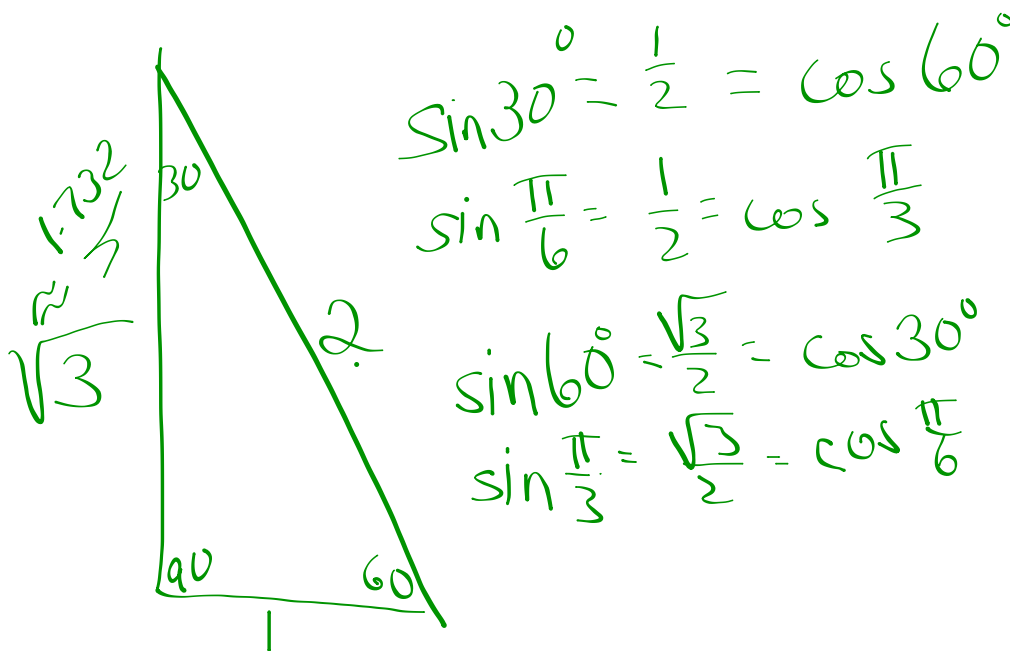
$$\cos 30^\circ = \frac{\text{adj}}{\text{hyp}} = \frac{2.7}{3} = .9$$

$$\sin 60^\circ = \frac{\text{opp}}{\text{hyp}} = \frac{2.7}{3} = .9$$

$$\cos 60^\circ = \frac{\text{adj}}{\text{hyp}} = \frac{1.5}{3} = \frac{1}{2}$$

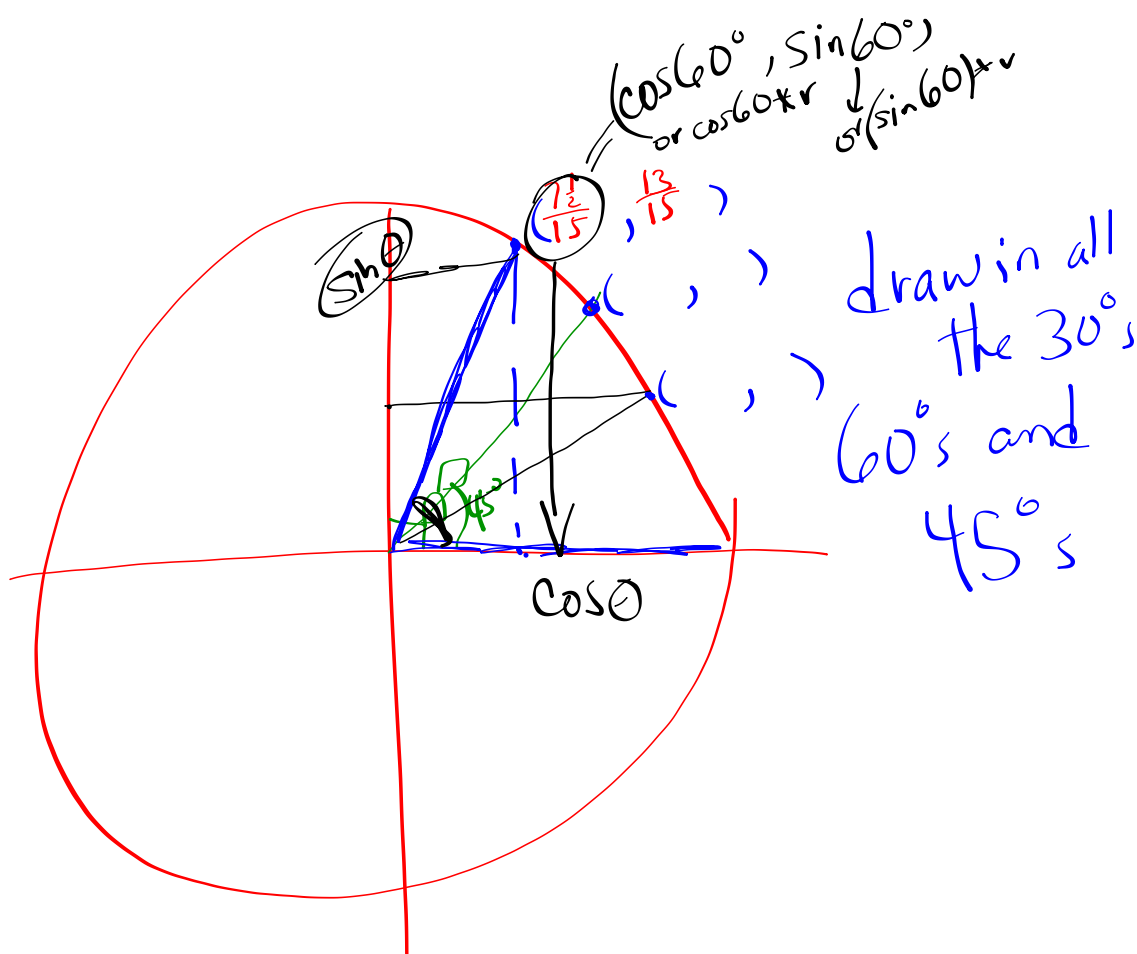
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